

**THE PROPOSED  
WENAHA FOREST RESERVE  
WASHINGTON AND OREGON**

Examination and Report

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## **THE PROPOSED WENAHA FOREST RESERVE WASHINGTON AND OREGON**

The proposed reserve lies in southeastern Washington and northeastern Oregon, following the high divide between the Grand Ronde and Snake rivers on the south, east, and north, and the Umatilla, Walla Walla and Columbia rivers on the west. This divide is known locally as the Blue Mountains. In Washington the tract includes portions of Walla Walla, Columbia, Garfield, and Asotin counties, and in Oregon portions of Umatilla, Union, and Wallowa counties.

As a large portion has not been surveyed, the exact area cannot be stated but it is approximately 695,200 acres. It has an extreme length of 61 miles, by surveyed lines, a maximum width of 53 miles, and a minimum width of 7 miles.

### **Topography**

This region is extremely rough and broken. The rock is generally of volcanic origin, much of it basalt, through which the streams have worn deep and narrow gorges. Though there are no points of unusual absolute altitude, none of the peaks being over 7000 feet above sea level, there is great range in comparative altitudes. For instance, the mouth of the Wenaha is only 1700 feet above sea level, while Oregon Butte a few miles to the northwest rises to an altitude of 6450 feet.

With the exception of the benches along the Lower Grand Ronde River, this region is a succession of high, narrow divides and deep gorges, with precipitous rocky slopes, usually without so-called bottom land.

The soil is generally shallow and loose and the native rock everywhere in evidence. This loose soil is very easily eroded and the bed rock washed bare when from any cause erosion is once started on the precipitous slopes.

### **Climate and Precipitation**

The climate of these hills is too severe for agriculture. Frosts are common during the summer and in September snow frequently falls and lies until in July, and even later on some of the higher ridges. The summer months, however, are delightfully cool and pleasant and bring many campers into these hills to escape the heat and dust of the plains to the north and west.

The following table shows the mean monthly annual precipitation and temperature registered at the nearest Weather Bureau station since its establishment at Walla Walla, in 1887:

<u>MEAN PRECIPITATION IN INCHES</u>		<u>MEAN TEMPERATURE FAHRENHEIT</u>	
January	2.27	January	32°
February	1.58	February	37°
March	1.78	March	45°
April	1.82	April	53°
May	1.69	May	60°
June	1.21	June	66°
July	0.29	July	74°
August	0.43	August	74°
September	0.91	September	64°
October	1.63	October	54°
November	2.02	November	43°
December	2.07	December	38°
Annual	17.70	Annual	53°

Walla Walla is on the Columbia River plains, several miles west of the proposed reserve with an altitude of only 1018 feet. The mean temperature at Walla Walla is unquestionably much higher than in the reserve. It is probable that the mean annual temperature of these hills is not much over 40° Fahrenheit. The extreme range in the hills is great, 20° and 30° below zero not being uncommon during the winter.

The precipitation in the hills is also much greater than at Walla Walla. The rain clouds coming up the Columbia River would naturally pass over the hot plains around Walla Walla and the water be precipitated when they came in contact with these cool forested hills.

This feature should have particular attention in connection with the proposed reserve. At present the high benches of the outlying foothills of these mountains are very productive wheat lands, failures being unknown even when but half a crop is produced on the parched plains below. Going west from these hills the rainfall rapidly diminishes until within the short distance of seventy-five miles is found the Pasco Desert, Washington, where agriculture without irrigation is practically impossible, and conditions are nearly as bad in Morrow County, Oregon. It is very probable that the annual precipitation of 17.70 inches at Walla Walla and consequent tremendous production of wheat and barley without irrigation is due to this high, cool range of hills against which the rain laden clouds are forced by the prevailing winds from the southwest. Once the vegetation is removed from these hills, turning them from cool, snow-holding slopes into bald ridges of bare rock, they will become in summer a region of intense heat and the rain clouds on contact with them will have their moisture holding capacity increased instead of lowered, as at present. The result will be a decided diminution in the rainfall over the great grain belt west of these hills.

Inasmuch as the rainfall of 17.70 inches is only just sufficient for the raising of wheat and barley, any diminution in this region will seriously cripple its greatest industry. Nor is this conclusion at all far fetched. In case the present stripping of the higher foothills for timber and severe over-grazing and consequent erosion and total destruction of the

vegetation of the moist ranges are continued, the end, drought, admittedly a matter of years, is none the less certain.

## The Forest

Accompanying this report is a forest map showing the differentiation in stand. [Compiler's Note: this copy of the report, which was printed from microfilm, did not contain any maps.] The different colors on the map show the areas within which the respective stands predominate. It should not be understood, however, that the entire area colored dark green, for instance, is covered with a continuous forest capable of yielding from 5,000 to 10,000 feet, B.M., per acre, but rather than this, heavy forest predominates, being interrupted occasionally by areas of lighter stand or even small parks. The same for other types.

Originally this range of hills was practically surrounded at low altitude, by an excellent belt of timber which doubtless encroached more or less upon the neighboring plains. On the north and west the lower and better portions of the belt have been removed, while along the southern end of the east side serious inroads have been made. The primary object of this cutting was to secure lumber for the adjacent settlements but as the land was of excellent quality and not of too high an altitude, it was eventually entirely cleared and is now ranked among the best grain lands in the region. Hence in these portions no forest can ever be expected again.

The uncut portion of this belt consists of a narrow strip across the south end of the reserve and running northeast along its east side. North of Township 3 North, the belt widens considerably, as can be seen by the dark green on the accompanying map.

This belt consists almost entirely of bull pine and white fir, with a stand varying from 5000 to 10,000 board feet per acre. In some of the damper cover there are pure stands of tamarack of small area. These tamarack clumps often have a stand of 30,000 board feet to the acre.

The natural tendency in this bull pine and white fir belt is toward an extension of the white fir at the expense of the pine. White fir, though of slower height growth, is far more tolerant than bull pine, reproduces fairly freely, and under normal conditions would naturally supplant the pine in time. This condition has been greatly aggravated in the portions that have been lumbered by cutting the pine and leaving the white fir. The fir, often already on the ground under the pine, springs up, and pine reproduction is thus impossible. This is unfortunate since bull pine is by far the more valuable species. In future lumbering on the reserve care should be taken not to sacrifice the more valuable to the inferior species.

Inside of this belt described above, comprising the inner and higher portion of the reserve, is a large area of very inferior forest. This varies from the bare, rocky slopes of the more precipitous hills to occasional, though rare, pure stands of tamarack of small area in the damper cover with a stand of sometimes 10,000 feet, B.M., per acre. This

type is confined, to a considerable extent, to the broader ridge tops and occasional cover at the heads of streams. It is composed of Engelmann spruce, lodgepole pine, red fir, tamarack, and white fir. The stand is usually rather open, and the trees are inclined to be short and limby. It would not be very valuable for lumber but most of it could be used for ties, fencing and firewood.

The natural tendency in this type is for the Engelmann spruce and white fir to supplant the other species, though slowly. In portions which have been repeatedly burned, tamarack and lodgepole pine are in the ascendancy. Tamarack, with its extremely heavy bark, has great fire resisting qualities and reproduces freely after fire, in fact nearly, if not quite, as freely as the lodgepole pine.

A great deal of this type is inaccessible and its chief value at present is the excellent protection cover it affords.

The remaining area of the reserve is mapped as woodland. This type includes the vast area of rocky, precipitous slopes on which occur indiscriminately, any of the above mentioned species, according to altitude. In these places the lack of forest cover is due to lack of soil and it is doubtful if conditions can ever be bettered. This type also includes occasional areas which have been so recently burned that little or no reproduction has taken place. This is a transient condition and if protected from fire and over-grazing the forest will reappear.

The classification and areas are shown in the following table:

	<u>ACRES</u>	<u>PER CENT OF WHOLE</u>
Commercial forest .....	130,560	18.7
(5000–10000 bd.ft. per acre)		
Commercial forest .....	181,120	26.
(1000–5000 bd.ft per acre)		
Woodland .....	382,880	55.
Agricultural land.....	<u>640</u>	<u>.3</u>
Total.....	695,200	100.0

### **Industries**

The only industry within the proposed reserve is stock grazing. This and its relation to the reserve will be treated under "Grazing." The industries of the higher foothills immediately outside the reserve are almost entirely lumbering and some cattle grazing. These will be treated under their respective heads.

The industries of the lower foothills and surrounding plains are farming, fruit raising and a few grist and planing mills. The region around Walla Walla and Dayton, northwest of the reserve, forms two of the finest wheat, barley, and fruit sections in the country. In

actual financial returns the various industries seem to rank as follows: wheat and barley, fruit, stock, hay, and lumbering.

The fruit and hay lands are the only lands irrigated. Wheat and barley land is worth from \$10 to \$50 an acre while this same land, irrigated and planted to fruit, is worth from \$50 to \$200 an acre. This irrigation is absolutely dependent upon the reserve for water. Hence the conservation of the water supply is of the utmost importance.

None of these industries are dependent upon the reserve for timber. A small amount is cut from deeded land in the foothills outside the reserve, but by far the larger portions of the supply is shipped in from the Pacific coast.

### **The Forest as a Protection Cover**

The necessity for the retention of these hills as cool, forested slopes rather than as bare, hot rocks has already been dealt with.

It seems to be the general opinion throughout this region that, while the actual volume of water in the streams has suffered no perceptible diminution, there has been a decided change in the manner of flow. This, however, is denied by the sheepmen.

The tendency, according to the farmers and water power millmen, is toward heavy and annually increasing floods in the early spring, followed by long periods of low water. It would seem quite probable that a middle course is the true one and that, though these conditions may not at present be as bad as claimed, the fact of any such change at all should be viewed with apprehension. If the total volume of water is the same now as formerly, and this is agreed upon by all, the trouble is not in the rainfall but in the manner of delivering this rainfall to the streams. The trouble is to be sought in the hills among which these streams find their source.

In these hills the conditions have undergone decided changes. Thirty-five years ago the foothills presented a practically unbroken body of heavy coniferous forests. Today, along the entire eastern and northern sides of the reserve, this belt has nearly disappeared and what is left is going rapidly. Thirty-five years ago the summits and upper slopes of the high interior hills probably had but little more forest cover than at present, but these high hills were then covered with a profuse growth of bunch grass, weeds, and shrubs, which have since been destroyed by small fires and sheep grazing. This growth of weeds and shrubs has been replaced largely by hard, baked earth, and often bare rock from which the scanty soil has been completely eroded.

This destruction of the surrounding timber belt and exposure of the bare rocks of the higher hills would unquestionably tend to increase spring floods at the expense of the late summer flow.

As to remedial measures, the destruction of this outlying belt of timber on the foothills can hardly be stopped as it is deeded land and when cleared makes excellent farming

land, nor is it necessary to secure the end in view. Since little snow falls here, it is not the deciding factor that the interior hills are where the snow and rainfall is heavy. Within the reserve in these hills a forest cover is a positive necessity for the regular flow of the streams.

The use of these streams for irrigation is not great at present but is increasing rapidly. Since the application of water to the land more than doubles its value, the demand for water is becoming insistent. On the eastern side of the reserve the Federal government is considering a project to use the Umatilla River to irrigate a considerable area in Morrow County, Oregon. The waters of the Walla Walla, Mill Creek, Touchet, Tucannon, Asotin and George creeks, are being used more and more each year. Particularly is this true of Asotin and George creeks in Asotin County, Washington, which, lying east of this range of hills, is somewhat deficient in rainfall, but by means of irrigation is becoming a surpassingly fine fruit country. This industry is absolutely dependent on the water from the reserve.

Large reservoir sites within the reserve are rare owing to the narrowness and rapid fall of the valleys. Among the foothills conditions are nearly the same, though here many small sites can be found which will hold water enough for individual enterprise at least.

### Settlements

Practically the only settlement within the boundary of the reserve is in Tucannon Creek in unsurveyed Township 9 North, Range 41 East. There are about 15 squatter homestead claims. These are bona fide settlers and home builders. When the township is surveyed it may be found advisable to eliminate these holdings from the reserve, but no general area for exclusion can be given at present as the bottom lands on which these squatter homesteads are located are of small and irregular area, nor is there a large surrounding area which is likely to be settled in the future.

The greater portion of the holdings within the reserve are the property of sheepmen who have here their dipping corrals and headquarter camps which have been located to secure control of some particularly desirable water.

The region lying around these hills is a well populated and industrially important one. The principal outlying towns near enough to be influenced by the reserve are Lewiston, Idaho; Walla Walla, Dayton, and Pomeroy, Washington; Pendleton and La Grande, Oregon. The reserve is surrounded to its very boundary on all sides, by farms. The industries and their rank in importance are mentioned under the head of "Industries." The alienated land is held at present as follows:

	<u>ACRES</u>	<u>PER CENT OF WHOLE</u>
Patented .....	3,600	0.5
Homestead .....	8,360	1.3
Approve State .....	560	0.1

Surveyed School .....	8,880	1.2
Unsurveyed School .....	24,320	3.5
Public Land.....	<u>649,480</u>	<u>93.4</u>
Total .....	695,200	100.0

In addition to the above, the fifteen squatter claims in the unsurveyed Township 9 North, Range 41 East, make a total of 49,120 acres, or 7 per cent of the total area alienated.

### **Roads and Railroads**

Wagon roads either approach close to, or enter the reserve for a short distance at slight intervals around the entire boundary, except that portion lying between the Wenaha River and the north line of Township 3 North. These roads are for the purpose of bringing out firewood and fencing material.

Only one wagon road crosses the reserve. This is known as the Woodward Road and runs from Summerville, Oregon, in Township 1 South, Range 38 East, northwest along the divide between the Umatilla River and Looking-glass Creek, then dropping down into the South Fork of the Walla Walla River, and thence on to Walla Walla, Washington. This road is usually impassable, owing to snow, from November 1 to May 1.

Although this is the only wagon road crossing the tract, travel by means of saddle horses and pack outfits is easy, as every gulch and every ridge has a good trail.

The rail line of the Oregon Railroad and Navigation Company passes through Pendleton and La Grande and quite close to the south and southeast boundary of the reserve. From Pendleton, Oregon, a branch line runs north through Walla Walla to Spokane, Washington. Walla Walla also has rail communication with the main line of the Northern Pacific at Wallula Junction. Dayton and Dixie, lying but a few miles from the northeast boundary of the reserve, are connected by rail with the line running from Walla Walla to Spokane.

There is some local talk of a railroad to be built from La Grande, Oregon, passing down the Grande Ronde and connecting with the Northern Pacific at Lewiston, Idaho, but it is impossible to state the source or truth of this rumor.

### **Lumbering**

There has been practically no lumbering on the area included in the proposed reserve. Considerable timber has been cut, however, from the foothills of the west and southwest sides. As a rule, these foothill lands are cleared after lumbering and make excellent farms. When not cleared for farms, and if not periodically burned, these cuttings reproduce rapidly and thickly to white and red fir, and bull pine. This lumbering is done on a very small scale, the mills cutting but a few thousand feet a day. The logs are sawed on the ground and the lumber marketed in the nearby towns at the following scale of prices:

Tamarack for finishing .....	\$35.00 per M
Bull pine, fir, and balsam; Rough lumber, etc. ....	\$15.00 to \$20.00 per M
Cordwood, usually bull pine.....	\$4.00 to \$5.00 per cord

The greater portion of the lumber used in the region surrounding the reserve is shipped in from Idaho and the coast, and there is no demand for timber from the proposed reserve. Its creation will have no present effect on lumbering, but with increased settlement and development of the benches along the Grande Ronde River, there will be in time a considerable demand for reserve timber. Along the east side of the reserve there is probably enough timber to supply the local demand but not much, if any, surplus, and any tendency to export beyond the immediate surrounding region should be discouraged.

### Grazing

The demand upon the range is considerable in excess of its present capacity. There are now using the reserve about 200,000 sheep, 40,000 cattle and 13,000? horses, with a total value of fully \$1,720,000. When there is added to this the sum invested in winter range, ranches, etc., it will be seen that the stock business, while not the most important industry in this region, is a very important one.

The horses using the reserve are owned almost entirely by settlers living nearby. It is rarely that one man has a larger bunch than fifty and these are ranged in the foothill region most convenient to the ranch. They are distributed fairly equally entirely around the reserve and on the steep slopes where the sheep do not go, they find very good bunch grass. These areas among the lower hills where the sheep do not go are small, however, and far apart, and in dry or late seasons the horses often suffer. They are taken in from May 1 to June 15, depending upon the season, and are usually left until the first severe snow in November or December and fed at the ranch through the winter. There is no winter range available. The horses are very good stock and usually are broken to work.

The cattle are owned by the adjacent settlers, occasionally in herds as large as 500 head, though usually much smaller, averaging, say, 25 head to the herd. Cattle, like the horses, seldom get very far into the hills but are confined to the bunch grass slopes around the outer edge of the reserve. The cattle are taken in during May and brought out usually in October and fed during the winter.

The number of range cattle and horses is determined entirely by the amount of summer range. Any increase in the available supply of this summer range will be followed by a corresponding increase in the number of range stock.

Most of the 200,000 sheep using the reserve are owned in Asotin, Walla Walla, Garfield and Columbia counties, Washington, and in Umatilla County, Oregon. The remainder come from across Snake River in Idaho. The sheepmen own ranches along the

Columbia and Snake rivers. These lands are sandy, desert-like areas, with outcropping lava and trap. These peculiar, knuckle-like outcroppings have given rise to the name of "scab lands" which is applied to the region. In winter these lands afford very fair range, if supplemented occasionally by some feeding and it is here that the sheep are wintered.

In the spring lambing takes place in these warm sands. With the return of the hot, dry summer the scab lands dry up and become valueless for range or any other purpose so it is necessary to start the sheep for the mountains during May. To the south lies the already over-stocked Blue Mountains Reserve, while to the west lie the Cascade, Mt. Rainier and Washington Forest Reserves, within which they could not hope to obtain admission even if they were able to drive the sheep such a great distance across a long since exhausted range. Hence, the only possible summer range for these sheep is within the proposed Wenaha Forest Reserve.

In bands of from 1500 to 2500, the sheep are driven in early in May, working up the gentler slopes through June, then, where possible, into the timber in July and August, in September working out onto the open bunch grass mesas and slopes, and in October starting back to the scab lands. Many of the sheepmen own occasional forties within the reserve, in which they have their dipping pens, headquarter camps, etc., or hold for the control of some particularly desirable water.

There is some conflict between sheep and cattle interests but not of a serious nature. It arises over the bunch grass slopes around the edge of the reserve. Inasmuch as this is excellent cattle range, and moreover is practically the only range available for cattle, it undoubtedly should, in so far as possible be reserved for the horses and cattle of the adjacent settlers.

The pasture lands of the reserve may be divided into three divisions: 1st, The bunch grass slopes of the lower hills just inside the reserve; 2nd, The ridge tops and mesas of the high interior hills with their growth of weeds and shrubs; 3rd, The precipitate rocky slopes of the interior hills, usually covered with a good growth of bunch grass. The first class range is used by sheep, cattle and horses. Horses and cattle remain here throughout the summer and do no harm whatever. The sheep work up these slopes in spring and back in fall and, except along the trails, have done no particular harm. This range, however, is very suitable for the horses and cattle of the adjacent settlers, and, being the only portion of the reserve available, should be reserved exclusively for them with well defined trails on the gentler slopes over which the sheep are to be driven to the interior.

The second class is used almost exclusively by sheep. The ridge tops and mesas were once covered with bunch grass and shrubs, but this growth has been destroyed by sheep grazing and is replaced at best with a rank growth of annual weeds, though too often severe erosion has taken place and the rock washed bare. The injury, however, is local and it is confined to the tops of the ridges and connecting trails. A careful

supervision of future grazing will doubtless cause these ridge tops to recover and in time maintain a forest.

The third class of grazing land, the precipitous slopes of the high interior hills, are usually far too steep for sheep grazing. Many of these slopes, never having been grazed, are covered with a magnificent growth of bunch grass. This makes an excellent soil cover as it holds the soil in place but does not interfere with the germination of seed as a continuous sod would. Stock of any kind should not be permitted to graze on these slopes as they are very steep and rocky, with dry, shallow, and loose soil, and a severe erosion could probably never be overcome without resort to artificial means. Occasional trails up or down these slopes will be necessary but they should be clearly defined and the stock confined to them.

The division of the reserve into individual sheep ranges is eminently practical and this plan should by all means be adopted. The grazing regulations recommended are given under "Administration."

### **Fire**

Practically every portion of the reserve has suffered more or less from fire. The largest and most important of these was one which came from the present Umatilla Indian Reservation about fifty years ago, burned up the river Umatilla, into the Reserve, then turned north along the west slope, across the heads of the Walla Wallas, and reached as far as the head of the Wenaha. This burn, however, has generally restocked finely, principally to tamarack and lodgepole pine.

Many small local fires have occurred from time to time, probably caused in various ways by lightning, campers, shepherders, etc. Many small fires in the tops of the ridges have been of great benefit to the sheepmen in clearing out thickets of dead and down timber.

The danger season is from June to October, although if there is a dry summer and late autumn, October is liable to be particularly dangerous. Fires may be expected from the sheep camps all over the reserve, from lightning and from campers, particularly from the latter around the Wenaha River and its branches, where there is excellent hunting and fishing.

### **Game**

There are quite a few deer in these hills but they are decreasing rapidly. It is claimed also that there is a small bunch of elk here.

Most of the streams afford excellent trout fishing. Many people come each summer in search of recreation and to escape the heat and dust of the surrounding plains. This is a very important feature in connection with this reserve. Small areas around the

principal camping places should be closed against sheep grazing and an effort made to check indiscriminate killing of game and fish.

### **Sentiment**

Local sentiment is strongly in favor of the reserve. The only opposition comes from nomadic sheepmen beyond the Columbia and Snake rivers and from the misapprehension of settlers on unsurveyed lands, who have been led to believe that a forest reserve would make it impossible for them to secure title. The farmers, water power mill men and cattle owners are strongly in favor of its creation, as are the local sheepmen, with the proviso that sheep be not excluded. As it is recommended that a reasonable number of sheep, properly distributed, be admitted, these men will be decidedly friendly. The irrigation projects now nearing completion will have their value decidedly increased by a permanently protected watershed, and all interested are insisting on a forest reserve.

### **Conclusion**

The creation of this reserve is important for the following reasons:

1. To protect the numerous streams heading within the area in order to bring them, as soon as possible, to their former even flow, so that freshets destructive to bottom lands may be avoided and a supply of water for the late summer irrigation be assured. (By means of irrigation wheat and barley lands worth from \$10 to \$40 an acre will produce magnificent fruits and increase their value often as high as \$200 per acre).
2. To protect a fast dwindling forest from periodical burning, injury from over-grazing, and ruin by improper methods of lumbering, and to guard against a possible export of material from a region where it will, in the near future, be in great local demand.
3. To protect the foothill grazing lands, which are very properly the range of the small herds of cattle of adjacent settlers, from the indiscriminate grazing of sheep.
4. To protect the local sheepmen of southeastern Washington and northeastern Oregon from the nomadic herds from distant points.

It is recommended therefore, that the proposed Walla Walla Forest Reserve be created, the boundary thereof to be as shown on the accompanying maps.

### **Administration**

On the maps the broken red and blue lines divide the reserve into divisions and districts respectively. It may be conveniently separated into two portions, to be called the northern and southern division.

Each division is divided into three districts, over each of which, a third-class ranger is to have charge. These rangers should confine themselves exclusively to their individual districts and should be employed from May 1 to December 1.

In charge of each division should be a second-class ranger. The second-class rangers should be employed the year round, and have entire charge of their divisions and be responsible to the supervisor for the work of the rangers under them. They will travel continually throughout their divisions, keeping closely in touch with the third-class rangers under them and, as it may be necessary, with the supervisor.

The supervisor in charge of the reserve should have his headquarters at Walla Walla, which is the principal town of the region, less than 20 miles from the reserve, and more accessible by mail and travel from all portions of the reserve than any other.

The annual expense of the administration of this reserve is summed up as follows:

1 Supervisor	at \$90, 12 months =	\$1080.00
2 Second-class Rangers	at \$75, 12 months =	1800.00
6 Third-class Rangers	at \$60, 7 months =	<u>2520.00</u>
		\$5400.00

There is no question but that fairly competent men can be secured at these prices, with the understanding, of course, that increased competency will be rewarded by promotion.

The following special rules should be maintained in managing this reserve:

1. Washington and Oregon stock permitted on the reserve should not be restricted necessarily to their home State.
2. No sheep grazing should be permitted anywhere inside the reserve, within two miles of the boundary line; this two mile strip around the reserve to be reserved for cattle and horses.
3. No goats should be allowed within the reserve.
4. Definite sheep trails should be laid out across this strip.
5. At least ten tracts of 20 acres each at convenient points throughout the reserve should be closed to sheep grazing, the grass on these tracts reserved for the stock of campers and the rangers.
6. In future lumbering, the deliberate sacrifice of bull pine and tamarack must not be permitted, to the benefit of lodgepole pine and white fir.
7. Sheep camps, not on deeded land, which have been used continuously for years, must be abandoned.
8. The total number of sheep using the reserve should be reduced 25,000 each year, until the reserve range shows decided recuperation, 175,000 to be the limit the first year.
9. 40,000 cattle and 15,000 horses to be admitted the first year.